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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,176	05/04/2006	Kazuhito Niwano	290402US2PCT	5192
22850	7590	04/01/2008	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			BATISTA, MARCOS	
			ART UNIT	PAPER NUMBER
			4134	
			NOTIFICATION DATE	DELIVERY MODE
			04/01/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/578,176	Applicant(s) NIWANO, KAZUHITO	
	Examiner MARCOS BATISTA	Art Unit 4134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/21/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/21/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 13 recites the limitation "said base station" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1- 5, 9, 10, 13 and 14 rejected under 35 U.S.C. 102(b) as being anticipated by Razoumov et al. (US 20020093976 A1).

Consider claim 1, Razoumv discloses a mobile station (**16**) which transmits and receives packet data to and from a base station (**12**) according to an assigned schedule such as a transmission timing which said base station (**12**) determines based on priority information on a priority of each packet data received from each mobile station (**16**), said mobile station comprising: a transmission data storage unit for temporarily storing

at least one or more packet data inputted thereto (**see [0007], [0013]** – pending data refers to data that is temporarily stored waiting for transmission time). Razoumv also discloses a priority control unit for generating priority information which said base station uses for determination of said schedule in advance based on a priority of at least the one or more packet data stored in said transmission data storage unit (**see [0005], [0027]** - mobile station 12 sends rate request indicators to base station 12 which are used to compute the PF or Priority Function to be scheduled by base station 12). Razoumv further discloses a transmitting unit for transmitting the priority information generated by said priority control unit to said base station (**see fig. 2, [0005], [0013]- [0018]** – the rate request indicator is transmitted from mobile station 16 to base station 12 in order for base 12 to compute the PF of Priority Function).

Consider claim 2, Razoumv discloses wherein when at least the one or more packet data are stored in said transmission data storage unit, and packet data is further inputted into said transmission data storage unit and an amount of packet data stored in said transmission data storage unit exceeds an amount of data which can be transmitted, via one transmission, to said base station in a predetermined format which is defined in advance between said base station and said mobile station, said priority control unit generates the priority information in advance based on a priority of at least one or more packet data included in a remainder of the one or more packet data stored in said transmission data storage unit and the packet data further (**see fig. 2, [0013]- [0018], [0023]** – the data rate request and the data rate indicator is used by base station

12 to schedule data transmission of mobile station 16 base on the amount of pending data before the data is transmitted to base station 16).

Consider claim 3, Razoumv discloses wherein the priority information is a maximum priority of at least the one or more packet data (see [0013], [0027] – the data rate request is associated with the amount of pending data).

Consider claim 4, Razoumv discloses wherein the priority information is an average of a priority of at least the one or more packet data stored in said transmission data storage unit (see [0013], [0016]).

Consider claim 5, Razoumv discloses wherein the priority information is a weighted mean average of a priority of at least the one or more packet data stored in said transmission data storage unit and calculated using an amount of each data (see [0013], [0016]).

Consider claim 9, Razoumv discloses wherein the transmission of packet data is carried out on time-division basis, and the transmitting unit sends out priority information generated by the priority control unit for each of plural packet data into which said packet data is time-divided onto a channel for transmission request which it transmits to the base station before transmitting each of said plural packet data to the base station

(see abstract, [0013]-[0018] – mobile station 16 requests a time to transmit to base station 12 via the data rate indicator and the data rate request).

Consider claim 10, Razoumv discloses wherein the priority control unit has two or more operation modes for setting of the priority information, the mobile station and the base station transmit and receive a signal for switching between the two or more operation modes for said priority information to and from each other, and, when receiving the signal for switching between the two or more operation modes for said priority information from said base station, the priority control unit switches between the two or more operation modes for the setting of the priority information, and generates the priority information which said base station uses for the determination of said schedule in advance according to one of the two or more operation modes to which another one of them has been switched, based on the priority of at least the one or more packet data stored in the communications data storage unit (see [0015] – mobile station 16 and base station 12 can use different mode of operations such as, real-time, concurrently and scheduled).

Consider claim 13, this is a system claim corresponding to apparatus claim 1. Therefore, is has been analyzed and rejected based upon the apparatus claim 1 above.

Consider claim 14, this is a method claim corresponding to apparatus claim 1. Therefore, is has been analyzed and rejected based upon the apparatus claim 1 above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razoumv et al. (US 20020093976 A1), hereafter "Razoumv," in view of Sakoda (US 6347120 B1), hereafter "Sakoda."

Consider claim 6, Razoumv discloses claim 1, but does not particular refer to wherein said transmitting unit transmits the priority information generated by the priority control unit to the base station by superimposing it onto a channel for a transmission request which said transmitting unit transmits to said base station before transmitting packet data.

Sokoda teaches wherein said transmitting unit transmits the priority information generated by the priority control unit to the base station by superimposing it onto a channel for a transmission request which said transmitting unit transmits to said base station before transmitting packet data (see fig. 9, col. 13 lines 6-15).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Razoumv and have it include wherein said transmitting unit transmits the priority information generated by the priority control

unit to the base station by superimposing it onto a channel for a transmission request which said transmitting unit transmits to said base station before transmitting packet data, as taught by Sokoda. The motivation would have been in order to offset reception delay (see col. 13 lines 33-41).

Consider claim 7, Razoumv discloses claim 1, but does not particular refer to wherein said transmitting unit transmits the priority information generated by the priority control unit to the base station by superimposing it onto a channel for data transmission via which said transmitting unit transmits packet data to said base station.

Sokoda teaches wherein said transmitting unit transmits the priority information generated by the priority control unit to the base station by superimposing it onto a channel for data transmission via which said transmitting unit transmits packet data to said base station (see fig. 9, col. 13 lines 6-15).

The motivation would have been in order to offset reception delay (see col. 13 lines 33-41).

Consider claim 8, Razoumv discloses claim 1, but does not particular refer to wherein said transmitting unit transmits the priority information generated by the priority control unit to the base station by superimposing it onto a channel for transmission of modulation type information via which said transmitting unit transmits modulation type information, as well as packet data, to said base station.

Sokoda teaches wherein said transmitting unit transmits the priority information generated by the priority control unit to the base station by superimposing it onto a

channel for transmission of modulation type information via which said transmitting unit transmits modulation type information, as well as packet data, to said base station.

The motivation would have been in order to offset reception delay (see col. 13 lines 33-41).

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razoumv et al. (US 20050129063 A1), hereafter "Razoumv," in view of Wigard (US 20040120306 A1), hereafter "Wigard."

Consider claim 11, Razoumv discloses claim 1. Razoumv also discloses the transmitting unit transmits the priority information which the priority control unit generates to said base station for each of the plural packet data into which each of the one or more data is time-divided (see [0005], [0013]).

Razoumv, however, does not particular refer to wherein the transmission data storage unit is provided with two or more memories, performs time division on at least the one or more packet data inputted thereto one by one to generate plural packet data, temporarily stores the plural packet data in said two or more memories, respectively, and outputs priorities of the plural packet data into which each of the one or more data is time-divided to the priority control unit one by one. Razoumv neither particular refer to the priority control unit generates the priority information which said base station uses for the determination of said schedule in advance based on the priorities of the plural packet data which are stored in said two or more memories, respectively, and into which each of the one or more data is time-divided.

Wigard teaches wherein the transmission data storage unit is provided with two or more memories, performs time division on at least the one or more packet data inputted thereto one by one to generate plural packet data, temporarily stores the plural packet data in said two or more memories, respectively, and outputs priorities of the plural packet data into which each of the one or more data is time-divided to the priority control unit one by one (see fig. 6, [0044], [0045]). Wigard also teaches the priority control unit generates the priority information which said base station uses for the determination of said schedule in advance based on the priorities of the plural packet data which are stored in said two or more memories, respectively, and into which each of the one or more data is time-divided (see fig. 6, [0044], [0045]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Razoumv and have it include wherein the transmission data storage unit is provided with two or more memories, performs time division on at least the one or more packet data inputted thereto one by one to generate plural packet data, temporarily stores the plural packet data in said two or more memories, respectively, and outputs priorities of the plural packet data into which each of the one or more data is time-divided to the priority control unit one by one and the priority control unit generates the priority information which said base station uses for the determination of said schedule in advance based on the priorities of the plural packet data which are stored in said two or more memories, respectively, and into which each of the one or more data is time-divided, as taught by Wigard. The motivation would

have been in order to queue of data packets and prioritize their transmission (see [0044]).

Consider claim 12, Razoumv discloses claim 10. Razoumv also discloses wherein the priority control unit can receive from the base station a result of determination of whether to have received packet data correctly for each of plural packet data into which each of the one or more data is time-divided (see [0018]).

Razoumv, however, does not particular refer to the priority control unit generates the priority information which said base station uses for the determination of the schedule in advance based on a highest priority among priorities of plural packet data which are stored in two or more memories for a first time and into which each of the one or more data is time-divided until receiving information indicating that the above-mentioned judgment result means that the base station received each of the plural packet data correctly.

Wigard teaches the priority control unit generates the priority information which said base station uses for the determination of the schedule in advance based on a highest priority among priorities of plural packet data which are stored in two or more memories for a first time and into which each of the one or more data is time-divided until receiving information indicating that the above-mentioned judgment result means that the base station received each of the plural packet data correctly (see fig. 6, [0044], [0045]).

The motivation would have been in order to queue of data packets and prioritize their transmission (see [0044]).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Marcos Batista, whose telephone number is (571) 270-5209. The Examiner can normally be reached on Monday-Thursday from 8:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Lun-Yi Lao can be reached at (571) 272-7671. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Marcos Batista
/M. B./
03/18/2008

Application/Control Number: 10/578,176

Page 12

Art Unit: 4134

/LUN-YI LAO/

Supervisory Patent Examiner, Art Unit 4134